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## **Book Review**

### **Mobility Patterns and Urban Structure, Paulo Pinho and Cecília Silva**

**By** Katja Leyendecker, Northumbria University in Newcastle, 22 January 2015

This book compares two European cities, Copenhagen and Oporto (Porto). Through systematic analyses, the book highlights not only the importance of the role of spatial planning, but also offers further evidence for the efficacy of land-use planning. The book's research explores this by bringing together two different analytical methods to explain urban form and its subsequent manifestations in transport use.

The first three chapters make an enjoyably informative, theoretically and practically engaging read on the background and history of sustainable travel, such as walking, cycling and public transport. These early chapters offer the reader a pragmatic summary of recent research history on transport and land-use planning. Chapters 1 to 4 provide a contextual setting for the subsequent chapters. The authors set out the importance of the research and its impact, or lack of impact as it may be on this occasion, on policy formulation and implementation.

Specifically, Chapter 1 describes the aim and purpose of the book, defined as developing further evidence on the connection between urban structure and mobility patterns. The authors state that the most influential factors determining an individual's travel behaviour are that of land-use structures, designs and usability of the transport systems, as well as individual ones, and continue with "In this context, we intend to build a broader consensus on the factors influencing travel behaviour, being concerned, in particular with both the influence of urban structure factors (namely, land use and transport system factors) and of motivational factors related to the social, economic and cultural characteristics of the individual traveller." (p.2). The authors' motivation is to inform policy by providing evidence to decision-makers. The second chapter summarises the influence of socio-demographics on travel choices and the connection to city design and city structure particularly. Chapter 3 looks at the interaction between personal characteristics and decision-making within city transport networks. A recurring aspect in this chapter is the centrality of structure: mono-centres and polycentric city shapes.

Travel patterns and socio-economic factors are outlined in chapter 4, which is illustrated with a comparative analysis of Copenhagen and Oporto urban form and land use policy, as mentioned above. An example of this analysis highlights the cities' differing proportion of transport modes (mode share). Perhaps unsurprisingly, Copenhagen varies from Oporto with its high use of cycles and its lower use of public transport. Further, Oporto's structure is poly-centric, compared to the more mono-centric layout of Copenhagen, effecting different travel patterns. Copenhagen is centralised, it has higher mean population density and, as a country capital, provides a good range of services. Consequently, these characteristics appear to translate into a more diverse provision for transport.

The book then introduces the reader to the methods employed in the comparative analysis in chapters 5 and 6. The quantitative methods used, 'Structural Assessment Layer' and the 'Explanatory Qualitative-Quantitative Method', both of which draw on macro elements in the urban structure. The book serves to promote, verify and consolidate these methods using factors such as population density and a population's centrality to destination to investigate

links between urban structure and travel. The following two chapters, 7 and 8, illustrate the practical application of these methods to the two cities (Copenhagen and Oporto).

The combined discussion, results and conclusions can be found in a rather short last chapter. Clear and unequivocal results from both analyses show that the layout of a city shapes its travel patterns. These results are relevant for land-use and transport planning policy, and hold wider implications for related policies such as climate change, energy, public health and environment protection. An argument that is emphatically reiterated in the book is the tremendous influence that Copenhagen's land-use policy, the 'Finger Plan', exerted on the shape of its contemporary urban form. Copenhagen's structure and the related transport landscape has not happened by chance, it was planned and laid out. This is in contrast to Oporto's more liberal approach to spatial planning resulting in an overall looser urban form limiting opportunity for low carbon travel.

It is unclear who the intended target audience for this book is. This makes sense in many ways, as interested readers may come from many fields and subject areas such as engineering, planning, social and communication specialisms and policy to name a few. On the other hand, if influencing policy was one of the book's core intents, then an opportunity may have been missed to address and engage policy makers more directly. It remains an academically written book which necessitates translation to other, less theoretically motivated fields outside academia. The book only gives a cursory nod to broader issues, such as spatial fairness and social justice in transport. If the authors sought wider support, this may have been an area that could have been expanded on.

A notable exclusion in the book is the mention of 'culture'. The reasons for this are clear given that advocates of sustainable travel often get stuck discussing cultural norms and traditions when these evidently are less important when compared with the impact of policy, environmental and structural constraints that are presented to the city user by urban patterns and plans. Furthermore, the comparison of two European major cities, Copenhagen and Oporto, may mean that cultural differences are less stark resulting in the marginal influence of culture.

The authors make no excuses for solely looking at the macro elements of urban planning rather than micro scale street layouts and networks. It would be interesting, although beyond the scope of the analytical methods employed in this book, to further drill down into finer grained elements. Recent research concentrates on investigating and identifying relevant micro elements that influence travel choice and behaviour. Elements chosen for investigation tend to be guided by data availability and availability of analytical tools. However transport manifests itself in inter-connected networks and these can be hard to describe and define. The task may even prove impossible ultimately, especially in the absence of a strong spatial planning policy which may well function as the bedrock for successful transport policy and implementation.

The book makes important contributions to the debate on structured regulation and policy making. If urban patterns make and break an individual's travel options, then controls like land-use planning policies are vital to provide better and healthier travel choices to people. Spatial policy works as a pre-requisite for effective transport planning. The authors are clear that both cities, Copenhagen and Oporto, remain car-centric in their general travel behaviour. These two cities, put under the macro-element microscope by the analyses

presented in this book, unambiguously link successful transport systems to spatial planning. The book critically directs policy and stresses policy's vital importance for fairness in city planning.

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